

The specific measures for implementing international strategy about food safety in China

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Abstract –With the increase of China's participation in international economic activity, the economic development of China has integrated into that of the whole world. Food plays an important role in the process of national economic development and gains much concern as strategic resources of China. Especially since the world food crisis in 2006, we realized that it's necessary to implement international strategy in order to ensure the country's food supply. In this paper, the author puts forward suggestions on international strategy which are suitable for China's national condition and grain condition based on the food supply situation of China in recent years.

Keywords –Food safety, Internationalization, Suggestion

1. Establishing a stable food production base and supply channels abroad

In early 2006, the world food price continued to rise and by 2007 in the international market average price of wheat, corn, soybean and rice rises respectively 58.2%, 44.4%, 45.9%, 6.2% year-on-year, all bulk grain is reaching the highest record in 10 years. So the problem of food scarcity becomes particularly outstanding and it gains the high degree attention in the world. In this context, the implementation of the food internationalization strategy, seeking stable grain production bases and supply channels become effective model for to ensure food stability in China.

1.1 The status of food production resources in China

Food supply situation largely depends on the food production resources and the food production resources playing key roles include land and water.

The land is one of the important factors. Although there is about 9.6 million square kilometers, the farmland is less than 1/5 and it tends to decline year by year. It shows the changes of 2005-2008 arable land and the farmland per person in Table 1-1:

Table1-1 The changes of arable land and the farmland per person in China

	2005	2006	2007	2008	2006
Farmland area(ten thousand hectares)	12208	12178	12174	12172	12178
The proportion in total area(%)	12.717	12.685	12.681	12.679	12.685
Farmland per person(mu)	1.4	1.39	1.38	1.37	1.39

Data source: The author finishes it according to < Environment Statistical Yearbook of China, <http://www.bjinfobank.com/IrisBin/Text.dll?db=TJ&no=450766&cs=5442495&str=farmland area per person>

From Table 1-1, the area of arable land takes up only a small part of China's land area. However, due to large population base of China, the farmland area per person is less than 1.4 acres, which is 30% of that of the world. Besides, with the advancement of industrialization and urbanization, China's arable land area is showing a further decline.

Water resources are another key factor affecting food production. Data shows that China's agricultural water

consumption accounts for more than 60% of the total water consumption. Although the total water resources are abundant, the per capita is only 1/4 of the world average and distribution of the limited water resources is uneven. Water resources in Changjiang River and its south area accounts for 80% of that of China while the arable land accounts for only 30%; There are more than 60% of the country's arable land distributing in the Huaihe River and its north, but there is only 20% of water

resources of the whole country. Therefore, the shortage and irrational distribution of water resources make it more and more difficult to improve farmland irrigation level in the future. Thus, we could know the importance of water resources ensuring the food production.

1.2 Looking for other food supply channels overseas

China feed 22% of the world's population just relying on 6% of the world's renewable water resources and 9% of the arable land while the world is rich in resources, for example, Africa, South America, Russian Far East and other regions are rich in the land and water resources. Depending on the basic national conditions of resources and the world resources possession, we must explore stable food supply channels abroad actively to ensure the country's food security.

Although China has made some achievements in establishing grain production base abroad and supply channels, we lack experience and we should do from the following two aspects.

Firstly, we should explore the available resources abroad actively and seek suitable grain production bases overseas based on China's basic national conditions. For example, there are 168 million hectares of arable land which is used actually only 62 million hectares and there are 106 million hectares of land still to be developed in Brazil. And it is not only located in tropical, but also extremely rich in water resources; Even though Russia's climate is very cold, the land is rich in resources and it has abundant rainfall, good agricultural conditions. There are about 50 million hectares of agricultural land, of which 26.65 million hectares are arable land, and about 1/3 of the arable land are abandoned. Besides, Africa, Southeast Asia, Russia, Central Asia, Brazil and Argentina are also suitable for us to develop agriculture.[8] China should learn the experience from the foreign countries and analyze the feasibility to product food overseas according to all countries' climate and policy. Secondly, the government should fully support to establish grain production bases overseas. In order to reduce the blindness and investment risk (such as the risk from trade, diplomatic, security, as well as production and operation), the government should provide prime loans or buyer's credit for companies to invest agriculture overseas. Finally, we should accumulated talents actively to make up for domestic demand. Do great efforts to train the personnel who know how to operate international agriculture, especially these talents who has the following capabilities: experience in the agricultural production management, mastering a foreign language, learning about the foreign customs, understanding the market conditions and the industrial policies. These can ensure the food production base overseas run smoothly

2. Operating the food wholesale, futures and e-commerce simultaneously

2.1 Play a fundamental role of food wholesale market.

As an important part of the grain market system, food wholesale market plays a fundamental role in the process of grain circulation. At present, there are more than 500 all kinds of grain wholesale market. The investment entities consist of state-owned, private and joint-stock and so on. In 2009, the total turnover roof various types of food wholesale markets reached 160 million tons, accounting for about 60% of the amount of the social food commodity circulation. Now, food wholesale market has become an important channel of grain circulation. [3] Enhancing the food wholesale market should proceed from the following aspects:

First, making scientific plan to build a multi-level food wholesale market. The government should strengthen guidance on food wholesale market building and assist a number of regional grain wholesale markets to play a key role in the nation's grain production and marketing convergence. The second is to improve the overall service function of the grain wholesale markets. Optimize the structure and layout of the market in the direction of the market building; Improve the transaction means and conditions to enhancing market levels and grades in the direction of capital investment; In the detracton of market operations and management, create a favorable market environment and services; Explore the complementary function of grain futures and spot markets in the direction of the development model. The third is to nurture the main players in the market and encourage bulk food entering transactions. Accelerating the reform of state-owned grain enterprises to change their operational mechanism and make the enterprise has the power to enter the wholesale market transactions. The fourth is to accelerate market legislation to regulate the supervision and management of food wholesale market.

2.2 Enhance the transactions function of the grain futures market.

In 2009, state grain futures trading volume is 747 million hands and the market turnover is 33.94 trillion yuan, compared with last year, each of them has an increase of 9.91% and 21.01%. The transactions volume accounted for 34.64% of the total futures trading volume and it plays an important role in the development process of the domestic futures market. Table 2-1 shows the transactions of Zhengzhou Commodity Exchange, Dalian Commodity Exchange in 2008 and 2009.

Table 2-1 Transactions of futures market in 2008 and 2009

	Cumulative total turnover (hand) in 2009	Cumulative total turnover (hand) in 2008	Cumulative gross turnover (million Yuan) in 2009	Cumulative gross turnover (million Yuan) in 2008
Zhengzhou	39509006	68201932	20353.59	11407.17

Commodity Exchange				
Dalian Commodity Exchange	707901240	611813422	319054.59	262911.60
The total sum of the National Cereals and Oil Futures	747410246	680015354	339408.18	280472.88

Source: Li Jingmou, China's grain market development report of 2010 [M]. Beijing: China Financial and Economic Publishing House, 2010.p.106.

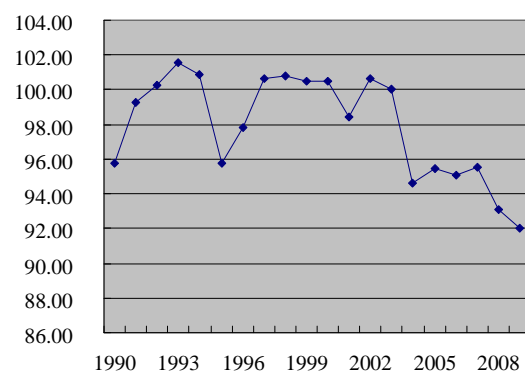
We should enhance the grain futures market functions from the following aspects. Firstly, Expand the variety of block trading. Currently, there are fewer varieties of grain futures market and the spot market and the futures market in the varieties is not unified. Especially we are lack of the important grain futures. Therefore, the development of bulk grain futures varieties could help to deepen the reform of the grain circulation system in China and promote the normal operation of the grain futures market. Secondly, improve the liquidity of the grain futures market. China's futures market should unlock the funds access restrictions and investor access restrictions as soon as possible to increase the number of funds in the futures market. The first is to allow some stronger futures brokerage firm to carry out the proprietary business and the business of managing money matters augmenting the customers; The second is to established a commodity futures investment fund that allows the futures brokerage firms, financial institutions and other agencies entered the futures investment funds and allows the securities investment funds, insurance funds entered the futures market by a certain percentage to improve the liquidity of the market. Finally, Strengthen supervision and improve the management level. From the experience of the grain futures markets' development at home and abroad, the market regulation and safeguard measures are essential to the grain futures. If we hope to strengthen and improve the supervision of the grain futures market, We need do from the following three aspects: The first is to learn from the international practice to strengthen the laws, regulations and institutional construction of the grain futures trading, such as sounding the large customers reporting system and improve the system of price limits. The second is to adjust and improve the regulatory regime of the grain futures market. We can consider that give part of the supervision's trading business functions, responsibilities and rights to the first-line Commodity Exchange. The third is to strengthen the management of the grain futures markets access. We should establish a quasi-human system of grain futures market, according to enterprises management level and the credit status of China.

2.3 Promoting the constant improvement of the e-commerce market.

We should pay more our attention on food e-commerce market as a new market. Specifically, the following aspects should be done. The first is to constantly improve the support and service system of food e-commerce. The development of e-commerce depends on the construction and support of the electronic payment, logistics information management, network security;

authentication, software services, and credit guarantee system and so on. Therefore, establishing a secure network trading platform becomes the key to the development of food e-commerce. The second is to encourage the large-scale food enterprises to establish e-commerce website. E-commerce which consists of business flow, logistics, information flow and cash flow and integrate the transaction information can reduce the cost of grain circulation significantly. The third is to make the complementary advantages between food wholesale and futures markets. E-commerce, the food wholesale and the futures market are a unified whole, the wholesale market is the foundation, the futures market is the development of the wholesale market, and the e-commerce services for these two markets. The operational efficiency of food wholesale and futures market can be improved effectively through the use of e-commerce. Therefore, an efficient operation system of three interrelated market formed.

3. Establishing a "buffer zone" between the two markets



The rate of Food self-
Fig3-1 The rate of China's grain self-

To solve food problem of China the production capacity of domestic food should be the first to consider. At the same time, we also should adjust surplus and deficiency through the international grain market. Judging by past experience, strange phenomena appeared that on the one hand when the domestic food supply is in relative balance there are a large number of imports, on the other hand when the supply of domestic grain production is tight there are a large number of exports. Therefore, there is necessary to establish a "buffer zone" between the two markets at home and abroad to ensure the coordinated operation of both domestic and international markets. This requires the harmonization of food domestic and foreign trade policies, improving the

operational efficiency of grain exports, preventing the uncoordination between direction of the grain imports and the actual supply and demand in the domestic seriously and reducing the "reverse adjustment".

On one hand, we must promptly grasp the domestic grain supply and demand situation, and ensure the correct flow of food. China should set up a specialized agency to deal with the food "reverse adjustment" situation. So that we are able to grasp the repositioning of the nation's grain, in order to balance the domestic food supply and demand through the international grain market. On the other hand, we should participate more actively in international cooperation. We should establish a long-term stable agricultural cooperative relationship with the important production country in the world. We should make full use of their advantages to encourage domestic food enterprises to go out of the country. And we need to take a new organizational form of management to foster and support some food enterprise groups with new institutional, live mechanism, large-scale and competitive that combined of a number of domestic and foreign trades.

4. To create an international food industry chain

4.1 Five international grain merchants

In recent years, the world's five major grain merchants development rapidly, they are ADM, Bunge, Cargill, Louis Dreyfus and Wilmar. They have become an important force in world agricultural trade, and the depth and breadth of the food industry chain established by the world's five largest grain merchants have reached a certain scale. Therefore, it is necessary to study the development of the five major international grain merchants, to provide a reference for our country create an international food industry chain.

4.2 Suggestions of the international industrial chain development in China

Through the development of five major international grain merchants business in China, we should make good use of every link in the food industry chain. The common characteristics of the five major international grain merchants is to achieve maximize of the Group. In order to safeguard the food security of our country, and integrate the production, processing, storage and transportation capacity of the domestic food, making it state-owned grain merchants to compete with the top five international grain merchants, the urgent task is to form a food international industrial chain. We make the following recommendations.

4.2.1 Increase the support of state-owned grain merchants.

The Bank of National Development should support the "going out" strategy of large state-owned grain merchants vigorously. Kazakhstan is an important breadbasket of the Soviet Union; the farming area is greatly reduced compared Soviet era. Kazakhstan could become a wheat

planting base of China's large state-owned grain merchants; it can save 0.1-0.2 Yuan per catty than Xinjiang wheat planting wheat in Kazakhstan. In addition, a number of countries in Africa and South America hope that Chinese enterprises to rent their land to grow grain. Only China's policy-oriented financial institutions provide sufficient funds for the state-owned grain merchants that foreign grain production base of China will be developed very well.

4.2.2 Integration of the domestic processing, the warehousing and the logistics enterprises actively.

The food processing is the ties connect food production with consumption, is also an important part of the food value-added; Grain circulation is the guarantee of food to supply smoothly. As seen above, the processing, storage and logistics plays an important role in the process of development of the food industry chain.

4.2.3 To plays the role of rail and maritime sectors.

The main mode of China's grain transport to the international market is rail and sea. Rail and maritime should cooperate with the state-owned grain merchants and sharing interests. We often encounter that the transportation capacity cannot be reconciled when we import soybean from Argentina and Brazil. If ocean shipping companies such as COSCO become the partners of the large state-owned grain merchants, the international competitiveness of China's grain enterprises will be strengthened significantly.

5. Changing the mode of grain trade.

At present, China's e-commerce has achieved a certain development, but compared with developed countries there is still a big gap. Therefore, China's grain trade is still based on traditional transactions, and the e-commerce transactions for the auxiliary. To make China's grain market internationalization, we must develop the food e-commerce market vigorously. Conduct e-commerce transactions has its own unique advantages: First of all, grain and oil commodities is in line with the basic features of the online sales of goods. It is easier to form standardization and the operation is relatively simple, as above it is in line with the direction of the development of electronic commerce. The second, the food industry operating outlets throughout the urban and rural areas, it is one of the few domestic commerce industries which have a strong group management industry. It is fully functional with a solid foundation and a wealth of experience in the delivery of goods. The third, the grain enterprise has a certain application infrastructure in information technology. In recent years, grain enterprises have made great progress in computer application and popularization. Most of the independent accounting enterprises have fitted out the commercial microcomputer, and some counties and cities have been set up a local area network owned their web sites and pages. The forth, most critical is that food is a colossal special commodity, the characteristics of low prices,

varieties, high cost and standard uniform made it very suitable for e-commerce.

It is based on the characteristics of the grain trading that our country must give full play to taking advantages of the new food e-commerce transactions, and formed a modern grain circulation pattern between traditional marketing and e-commerce. Generally, the e-commerce activities of food enterprise can be divided into two categories: online trading and online business. We could develop the grain e-commerce from the following two aspects.

On one hand, we should strengthen the online trading. China should support the large grain enterprises to establish their own e-commerce website vigorously. So that they can grasp the dynamic of grain trading timely and reduce their transaction costs. At the same time, a perfect grain logistics system can improve the efficiency of the food e-commerce.

On the other hand, we need to strengthen the online business. The online marketing, information gathering and other sectors are conducive to the development of food enterprises. For customers, they can transactions stay at home, not only saves times, but also improves the efficiency; For businessmen, they can collect the information of grain transactions timely and transport the food in time. At the same time, they can release the information of grain supply and price, in order to meet the needs of more customers.

References

- [1] Li Xiande, Wang Shihai. The impact of international grain market fluctuations on China and relative suggestions [J]. Problem of agricultural economy, 2009, (9): 9-15.
- [2] Guan Jian. The strategy of China's food security in 21century [J]. The Party School Journal of CPC Sichuan province, 2005, (4): 34-38.
- [3] Li Jingmou. China's grain market development report of 2010[M]. Beijing: China Financial and Economic Publishing House, 2010.p.100-116.
- [4] Li Xiande, Wang Shihai. The impact of international grain market fluctuations on China and relative suggestions [J]. Problem of agricultural economy, 2009, (9): 9-15.
- [5] Zheng Weicheng. Wheat seed subsidies to improve the role of the food industry chain in Henan Province [J]. Anhui Agricultural Sciences, 2009, 37(36): 18183-18185.
- [6] Deng Fujian. The present situation and prospects of the food business e-commerce in China [J]. Food Research, 2004, (3):51-54.
- [7] China will take comprehensive measures to substantially improve the efficiency of agricultural irrigation. [http://www.gov.cn/wszb/zhibo170/content_805321](http://www.gov.cn/wszb/zhibo170/content_805321.htm) htm.
- [8] The farmers overseas are busy with farming. [http://www.cnr.cn/allnews/201007/t20100711_506715033](http://www.cnr.cn/allnews/201007/t20100711_506715033.html). html.
- [9] The Environment Statistical Yearbook of China. (2008-2009)
<http://www.bjinfobank.com/IrisBin/Text.dll?db=TJ&no=45076>
- [10] Rahim Asadian, Critical management,[J], Advances in Asian Social Science, Vol 1, No 4 (2012)